REMARKS

Following entry of the amendments contained herein, Claims 2 - 26 are pending in this Application. Independent Claim 1 has been cancelled and new independent Claim 26 has been added. Dependent Claims 2, 7, 9, 10, 15-16, 18-23, and 25 have been amended to change their dependencies from cancelled independent Claim 1 to new independent Claim 26. Dependent Claim 3 has been amended to delete a limitation which has been included in new independent Claim 26. Dependent Claim 9 has been amended to add the words: "to the fluid bed" in order to maintain consistency with the language contained in new independent Claim 26. Dependent Claim 10 has been amended to add the word: "directly" in order to maintain consistency with the language contained in new independent Claim 26. No other amendments to the Claims have been made in this Amendment.

New independent Claim 26 includes all of the limitations which were contained in cancelled independent Claim 1, and also includes the following additional limitations which have been included for the purpose of clarifying certain inherent features of the invention in response to the Advisory Action dated July 29, 2008:

1. "...wherein providing the fluid bed is comprised of introducing the solid particles to the fluid bed at an upstream horizontal position in the fluid bed...". Support for this limitation is found in the Application at Page 8, lines 13-14; and in Claim 3 as originally filed;

2. "...wherein providing the fluid bed is further comprised of introducing the fluidizing medium to the fluid bed...". Support for this limitation is found in the Application at Page 8, lines 28-29; Page 9, lines 28-30; Page 11, lines 18-21; Page 13, lines 30-31; and Figure 1;

3. "...introducing the liquid feed material directly to the fluid bed, separately from the solid particles and separately from the fluidizing medium...". Support for this limitation is found in the Application at Page 8, line 13 to Page 9, line 12; Page 9, line 28 to Page 10, line 10; Page 11, line 17 to Page 12, line 4; and Figure 1; and

4. "maintaining the solid particles as fluidized solid particles in the feed zone by introducing the fluidizing medium to the fluid bed in the feed zone;". Support for this limitation is found in the Application at Page 13, line 8 to Page 14, line 14; Page 17, line 4 to Page 18, line 11; Page 19, lines 30-34; and Figure 1.

In the Advisory Action, the Examiner has rejected the Claims as follows:

(a) Claims 1 - 15, 19 - 21 and 25 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,717,867 issued September 13, 1955 to Jewell et. al.;

(b) Claim 18 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Jewell et. al.; and

(c) Claims 1, 16, 17 and 22 - 24 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,895,906 issued July 21, 1959 to Harper.

It is respectfully submitted that these rejections of the Examiner are overcome by the amendments to the Claims, including the clarifying limitations included in new independent Claim 26, and by the remarks that follow.

Independent Claim 26

New independent Claim 26 is as follows (underlining, bolding and annotation added):

26. A process for converting a liquid feed material into a vapor phase product comprising the following steps:

(a) providing a fluid bed comprising solid particles and a fluidizing medium, **wherein providing the fluid bed is comprised of introducing the solid particles to the fluid bed at an upstream horizontal position in the fluid bed [Addresses Point 2 in the Advisory Action]**, wherein providing the

fluid bed is further comprised of introducing the fluidizing medium to the fluid bed so that the fluidizing medium is moving in a substantially vertical fluidizing direction, and wherein the solid particles are at a conversion temperature which is suitable for facilitating the conversion of the liquid feed material to the vapor phase product;

(b) moving the solid particles in a substantially horizontal solid transport direction from the upstream horizontal position to a downstream horizontal position;

(c) **introducing the liquid feed material directly to the fluid bed, separately from the solid particles and separately from the fluidizing medium [Addresses Point 1 in the Advisory Action]**, at a feed zone located between the upstream horizontal position and the downstream horizontal position in order to facilitate the conversion of the liquid feed material into the vapor phase product;

(d) **maintaining the solid particles as fluidized solid particles in the feed zone by introducing the fluidizing medium to the fluid bed in the feed zone [Addresses Point 3 in the Advisory Action]**; and

(e) collecting the vapor phase product.

The Advisory Action dated July 29, 2008

In the Advisory Action dated July 29, 2008, three Points are provided in support of the rejections of the Claims, as detailed above.

Point 1 in the Advisory Action asserts that: "introducing the liquid feed material to the fluid bed" as claimed in cancelled independent Claim 1 is disclosed in Jewell et al because combining the oil feedstock with the coke particles in the "mixing and vaporizing zone" results in the unvaporized portion of the oil feedstock being absorbed by the coke particles in the mixing and vaporizing zone. The coke particles subsequently settle onto the upper surface of the fluid bed,

thereby indirectly introducing a portion of the oil feedstock to the fluid bed simultaneously with the coke particles.

Referring to new independent Claim 26, as set out above, it is respectfully submitted that the limitation: "...introducing the liquid feed material directly to the fluid bed, separately from the solid particles and separately from the fluidizing medium..." which is contained in Claim 26 clearly overcomes Point 1 because it explicitly clarifies that the liquid feed material is introduced "directly" to the fluid bed, and "separately from the solid particles".

Point 2 in the Advisory Action asserts that although the oil feedstock in Jewell et al is introduced to the fluid bed with the coke particles, at least a portion of the fluid bed is located upstream of the conical partition (24) through which the oil feedstock and the coke particles are introduced. In other words, it would appear that some of the coke particles which are introduced to the fluid bed with the oil feedstock at the conical partition (24) actually move upstream upon entering the fluid bed.

Referring to new independent Claim 26, as set out above, it is respectfully submitted that the limitation: "...wherein providing the fluid bed is comprised of introducing the solid particles to the fluid bed at an upstream horizontal position in the fluid bed..." which is contained in Claim 26 clearly overcomes Point 2 because it explicitly clarifies that the "upstream horizontal position" is the position at which the solid particles are introduced to the fluid bed. Consequently, the limitation: "...introducing the liquid feed material...at a feed zone located between the upstream horizontal position and the downstream horizontal position..." which is contained in new independent Claim 26 (and which was also contained in cancelled independent Claim 1) clearly provides that the liquid feed material is introduced to the fluid bed at a location which is downstream from the location at which the solid particles are introduced to the fluid bed.

Point 3 in the Advisory Action asserts that in Harper, injecting the fluidizing medium at the energizing zone (19) fluidizes the catalyst particles, which spill over the baffle (14) into the reaction zone (20) in at least a partially fluidized state, with the result that at the instant when oil is injected into the reaction zone (20) the catalyst particles are already in a "fluidized state", even though no fluidizing medium is introduced to the fluid bed in the reaction zone (20).

Referring to new independent Claim 26, as set out above, it is respectfully submitted that the limitation: "...maintaining the solid particles as fluidized solid particles in the feed zone by introducing the fluidizing medium to the fluid bed in the feed zone..." which is contained in Claim 26 clearly overcomes Point 3 because it explicitly clarifies that the fluidizing medium is introduced to the fluid bed in the feed zone. Furthermore, the limitation: "...introducing the liquid feed material directly to the fluid bed,...separately from the fluidizing medium..." which is contained in new independent Claim 26 specifically provides that the liquid feed material is introduced to the fluid bed separately from the fluidizing medium, thereby clarifying that the fluidizing medium is distinct from the liquid feed material and clarifying that gases produced by the reaction of the liquid feed material are not relied upon as the fluidizing medium in the feed zone.

As a result of the clarifying limitations contained in new independent Claim 26 as discussed above, it is respectfully submitted that all of the Points provided in the Advisory Action and asserted in support of the Claim rejections contained in the Advisory Action have been addressed and overcome.

Other Remarks

Point 3 in the Advisory Action asserts that the fluidizing medium (steam) which is injected into the energizing zone (19) in Harper serves two purposes. The first purpose is: "...to lift fluidized catalyst flowing under baffle (18) from second stripping zone (23) over baffle (14) separating energizing zone (19) from reaction zone (20)." (Column 5, lines 39-42 of Harper). The second purpose is: "...to fluidize the finely-divided catalyst particles." (Column 5, lines 42-43 of Harper).

Point 3 in the Advisory Action further asserts that at the instant when oil is injected into the reaction zone (20), the catalyst particles are already in a "fluidized" state (referring to Column 5, lines 50-54 of Harper). Based upon this assertion, the Examiner submits that the fluidized particles of Harper's reaction zone (20) are at least partly fluidized by the fluidizing medium (steam) injected into the energizing zone (19) commonly housed within the reaction zone (20).

The Applicant respectfully submits that steam introduced into the energizing zone (19) in Harper would not be capable of fluidizing the catalyst particles in reaction zone (20), because the steam would pass upward to the cyclone separators (39,40) while the catalyst particles would fall downward into the fluid bed in reaction zone (20).

It is therefore respectfully submitted that the apparatus disclosed in Harper would not provide a fluid bed of catalyst particles in reaction zone (20) without the fluidizing effect of gases produced by the reaction of the oil in the reaction zone (20).

Consequently, it is respectfully submitted that the Applicants' invention as defined in new independent Claim 26 is clearly distinguishable from the apparatus and process disclosed in Harper, since the Applicants' invention relies upon the introduction of the fluidizing medium in the feed zone in order to fluidize the solid particles in the feed zone.

Summary

In summary, it is respectfully submitted that neither Jewell et. al. nor Harper anticipates new independent Claim 26. It is therefore respectfully submitted that new independent Claim 26 is allowable and allowance of new independent Claim 26 is respectfully requested.

Dependent Claims 2 - 25 depend directly or indirectly from new independent Claim 26. It is respectfully submitted that these dependent Claims are allowable for the distinctions defined therein as well as for the reasons supporting the allowability of Claim 26. Accordingly, allowance of dependent Claims 2 - 25 is also respectfully requested.

In view of the foregoing remarks, it is submitted that this Application is in condition for allowance and allowance of all of Claims 2 - 26 is respectfully requested.

Respectfully submitted,

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Dated October 10, 2008

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1155-09-Amendment